

Recombinant Human IL-6 Protein

Cat. No. 110110

DESCRIPTION

Expression system	<i>E. coli</i>
Amino acid sequence	Val30-Met212, Accession #P05231
Molecular mass	Recombinant Human IL-6 Protein, a monomer containing 183 amino acid residues, has a predicted molecular mass of approximately 20.8 kDa.

SPECIFICATIONS

Purity	> 98% by SDS-PAGE gel and HPLC analyses.
Endotoxin	Less than 0.1 EU/μg of rHuIL-6 as determined by LAL test.
Activity	The ED ₅₀ as determined by a cell proliferation assay using IL-6-dependent murine 7TD1 cells is less than 0.01 ng/ml, corresponding to a specific activity of $> 1.0 \times 10^8$ U/mg.
Formulation	Lyophilized from a 0.22 μm filtered solution in PBS. See CoA for details.
Reconstitution	Always centrifuge tubes before opening. Do not mix by vortex or pipetting. Reconstitute in sterile distilled water to a concentration of 0.1-1.0 mg/mL. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

SHIPPING & STORAGE

Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature listed below.
Storage	Please use a manual defrost freezer and avoid repeated freeze-thaw cycles. ● Lyophilized protein should be stored at $\leq -20^{\circ}\text{C}$, stable for 12 months after receipt. ● Reconstituted protein solution can be stored at $2-8^{\circ}\text{C}$ for 1 month. ● Aliquots of reconstituted samples are stable at $\leq -20^{\circ}\text{C}$ for 3 months.

BACKGROUND

Human interleukin-6 (IL-6) is a pleiotropic cytokine that centrally mediates immune regulation, inflammatory reactions and hematopoiesis under both physiological and pathological conditions. It is mainly produced by activated T cells, B cells, monocytes/macrophages, fibroblasts and endothelial cells.

IL-6 signals through a receptor complex consisting of IL-6Rα (gp80) and the signal-transducing subunit gp130, triggering downstream pathways including JAK/STAT3. It promotes B-cell proliferation and plasma cell differentiation for antibody production, and modulates T-cell activation and differentiation. As a major inducer of acute-phase responses, IL-6 stimulates hepatocytes to synthesize acute-phase proteins such as C-reactive protein (CRP). It also synergizes with IL-3 to drive megakaryocyte maturation and platelet generation, and participates in bone metabolism regulation.

Recombinant human IL-6 is a widely used research reagent, commonly expressed in *E. coli*, CHO or HEK293 systems. Supplied as high-purity, low-endotoxin lyophilized powder with verified bioactivity, it supports multiple in-vitro functional assays, including induction of acute-phase protein synthesis and B-cell differentiation studies.

Version202605.1

For research, laboratory or further evaluation purposes. NOT for Human Use.

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